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Ciprian Agapi

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EXAMINER

COLUCCI, MICHAEL C

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/726,102	<b>Applicant(s)</b> AGAPI ET AL.	
	<b>Examiner</b> MICHAEL C. COLUCCI	<b>Art Unit</b> 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/22/2010 has been entered.

### **Response to Arguments**

2. Applicant's arguments filed 03/22/2010 have fully considered but they are not persuasive.

#### **Argument (page 5 paragraph 3):**

- “1) The at least one grammar defining valid responses and the response option must be associated with the same prompt (i.e., the first prompt).
- 2) The valid responses in the at least one grammar and the response option must trigger different prompts (i.e., the second prompt and third prompt, respectively).
- 3) If the response option is also one of the valid responses in the at least one grammar, then the prompt associated with the response option (i.e., the third prompt) is provided to the user instead of the prompt associated

with the valid responses of the at least one grammar (i.e., the second prompt) when the response option is received.”

**Response to argument:**

After further review, Examiner maintains the use of Ehsani in view of Marx. However, Examiner believes that Marx is better suited to teach “adding a representation of at least one grammar, selected by the designer from a list of existing grammars, to the call flow representation in response to at least one designer instruction, received via the user interface, to add the at least one grammar in association with the first prompt, the at least one grammar defining valid responses to the first prompt”, wherein Marx appears to explicitly teach a vocabulary having valid responses associated with a specific prompt as well as different prompts presented to a user depending on his or her answer. Examiner has presented the first, second, and third “prompt” limitations of claims 24 and 25 as taught by Marx to explain the use of Dialog Modules.

For instance consider Fig. 7 of Marx containing various elements such as Dialog Modules (e.g. DM1, DM2, ... DM8, etc) used in reaction to a user response. A designer can easily create various branching Dialog Modules depending on whether a response matches or not. Further, consider Fig. 5 of Marx, which demonstrates the concept of a Dialog Module, wherein each prompt is directly associated with the response for a specific Dialog Module. For instance, Marx teaches in Fig. 9 that for each Dialog Module, a vocabulary is extracted specific to the nature of the prompt and response pair.

Marx teaches for example, an ItemList Module 520 accesses a customized recognized vocabulary having entries that identify people recognized by the Service 410. In the example of FIG. 1, the recognized vocabulary corresponds to employees of Company A along with an operator and/or names of departments (e.g., sales, customer service, etc.). This customized vocabulary will typically be implemented by the application developer to recognize an employee not only by full name, but also by other names by which the employee could be recognized, such as just a last name, just a first name, or a nickname, perhaps combined with a last name. For example, if an employee is named Michael A. Smith, the database should recognize not only "Michael Smith," but also other names by which a caller is likely to identify that employee, such as "Mike Smith," "Michael," "Mike," and "Smith." (Marx Col. 8 line 64 – Col. 9 line 14).

In other words, Marx teaches that synonyms for an expected response are considered to be valid responses in the context of the selected grammar (vocabulary) list. Consider Dialog Modules loaded with a corresponding vocabulary/grammar that will determine various prompts.

As an example with respect to (Marx Col. 8 line 64 – Col. 9 line 14), a first prompt is presented to a user, wherein a designer implements Dialog Modules anticipating the response of the user such in Fig. 4 with the vocabulary/grammar of Fig. 9 used during the call flow. A user responds with a name of an employee "Mike Smith". The system then verifies the vocabulary/grammar options from the vocabulary/grammar list and verifies the name of the employee as "Michael Smith, Mike Smith, Mike, Smith, etc". The user then responds with YES, NO, OPERATOR, or time out), at which point if YES

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is the user response, the system will prompt "Thank you". However, if the user says NO, the system may ask the user to repeat the name of the employee, or transfer the user to an operator. This is explicitly adding a representation of a prompt depending on the response option or grammar. Such as if YES or NO is the response option and valid grammar. Also, if a YES or NO command is expected as well as an employee name a first and second or a first and third prompt combination will be presented.

As previously cited, please consider the following example with respect to the above interpretation:

**Prompt 1:**

**"If you know the name of the person you wish to speak to, please say the first name followed by the last name now. If you would like to speak to an operator, please say `Operator` now."**

*The application then waits for a response from the caller (130) and processes the response when received (140). If the caller says, for example, "Mike Smith," the application must be able to recognize what the caller said and determine whether there is a Mike Smith to whom it can transfer the call. Robust systems should recognize common variations and permutations of names. For example, the application of FIG. 1 may identify members of a list of employees of Company A by their full names--for example, "Michael Smith." However, the application should also recognize that a caller asking for "Mike Smith" (assuming there is only one employee listed that could match*

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*that name) should also be connected to the employee listed as "Michael Smith."*

*Assuming the application finds such a person, the application outputs a confirming prompt:*

***Prompt 2 (In vocabulary?):***

***"Do you mean `Michael Smith`?" (150).***

*The application once again waits to receive a response from the caller (160) and when received (170), takes appropriate action (180). In this example, if the caller responded "Yes," the application might say "Thank you. Please hold while I transfer your call to Michael Smith," before taking the appropriate steps to transfer the call. FIG. 2 shows some of the steps that are performed for each interactive step of the interactive application of FIG. 1. Specifically, applying the process of FIG. 2 to the first interaction of the application described in FIG. 1, the interactive speech application outputs the prompt of step 120 of FIG. 1 (210). The application then waits for the caller's response (220, 130). This step should be implemented not only to process a received response, as shown in the example of FIG. 1 (140), but also to handle a lack of response. For example, if no response is received within a predetermined time, the application can be implemented to "time out" (230) and reprompt the caller (step 215) with an appropriate prompt such as*

***Prompt 3 (Initially not in vocabulary):***

**"I'm sorry, I didn't hear your response. Please repeat your answer now,"**

*and return to waiting for the caller's response (220, 130) (Marx Col. 1 lines 30-67).*

### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 24 is rejected under 35 U.S.C. 101 because:

Claim 24 does not fall within one of the four statutory categories of invention.

Supreme Court precedent<sup>1</sup> and recent Federal Circuit decisions<sup>2</sup> indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

Claim 24 recites purely mental steps and would not qualify as a statutory process. In order to qualify as a statutory process, the method claim should positively

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<sup>1</sup> *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

<sup>2</sup> *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).



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recite the other statutory class to which it is tied (i.e. apparatus, device, product, etc.).

For example, the method steps of claim 24 appear to recite mental steps such as “adding a representation... selected by the designer” and do not identify an apparatus that performs the recited method steps, such as the computer system with processing capabilities as described in the specification (present invention spec. [0024-0025]).

Claims 25 is rejected under 35 U.S.C. 101 because:

The claimed invention is directed to non-statutory subject matter.

As per the claims, the language “computer readable medium”

Examiner can not find the definition for a “computer readable medium” within the disclosure of the present invention. Examiner merely finds a reference to computer readable instructions from Patent 6,173,266 (present invention spec. [0005]), and is therefore unsure of the nature of the medium claimed (i.e. a nonstatutory signal or carrier wave).

### **Claim Rejections - 35 USC § 103**

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehsani et al. US 20020032564 A1 (hereinafter Ehsani) in view of Marx et al. US 6173266 B1 (hereinafter Marx).

Re claims 24 and 25, Ehsani teaches a method for generating a speech recognition application call flow from a call flow representation of the speech recognition application call flow specified by a designer using a user interface configured to allow the designer to create the call flow representation ([0221]), the method comprising:

adding a representation of a first prompt to the call flow representation in response to at least one designer instruction, received via the user interface, to add the first prompt, the first prompt being defined to solicit a response from a user of the speech recognition application call flow ([0213]);

adding a representation of a response option to the call flow representation in response to at least one designer instruction, received via the user interface, to add the response option in association with the first prompt, the response option defining a valid response to the first prompt ([0215], consecutive multiple prompts dependent on preceding prompts, "his/her name, address, credit card number, and upon successful completion of these items ask the user to say the title of the book he/she is looking for");

However, Ehsani fails to teach

adding a representation of at least one grammar, selected by the designer from a list of existing grammars, to the call flow representation in response to at least one designer instruction, received via the user interface, to add the at least one grammar in

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association with the first prompt, the at least one grammar defining valid responses to the first prompt

adding a representation of a second prompt to the call flow representation in response to at least one designer instruction, received via the user interface, to add the second prompt, the second prompt to be provided to the user should the user respond to the first prompt with one of the valid responses defined in the at least one grammar

adding a representation of a third prompt to the call flow representation in response to at least one designer instruction, received via the user interface, to add the third prompt, the third prompt to be provided to the user should the user respond to the first prompt with the response option

automatically generating the speech recognition application call flow from the call flow representation such that if the response option is defined as a valid response in the at least one grammar the third prompt is presented to the user instead of the second prompt when the user responds to the first prompt with the response option

Marx teaches a user interface for the design and implementation of a call flow (Fig. 7) having a set of parameters and recognized vocabularies (Fig. 8), wherein Marx teaches well known uses of call flow designs having multiple prompts, where Marx teaches an application that outputs an audible speech signal to the caller by, for example, playing a prerecorded prompt or using a speech generator such as text-to-speech converter: "If you know the name of the person you wish to speak to, please say the first name followed by the last name now. If you would like to speak to an operator,

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please say `Operator` now." The application then waits for a response from the caller (130) and processes the response when received (140). If the caller says, for example, "Mike Smith," the application must be able to recognize what the caller said and determine whether there is a Mike Smith to whom it can transfer the call. Robust systems should recognize common variations and permutations of names. For example, the application of FIG. 1 may identify members of a list of employees of Company A by their full names--for example, "Michael Smith." However, the application should also recognize that a caller asking for "Mike Smith" (assuming there is only one employee listed that could match that name) should also be connected to the employee listed as "Michael Smith." Assuming the application finds such a person, the application outputs a confirming prompt: "Do you mean `Michael Smith`?" (150). The application once again waits to receive a response from the caller (160) and when received (170), takes appropriate action (180). In this example, if the caller responded "Yes," the application might say "Thank you. Please hold while I transfer your call to Michael Smith," before taking the appropriate steps to transfer the call. FIG. 2 shows some of the steps that are performed for each interactive step of the interactive application of FIG. 1.

Specifically, applying the process of FIG. 2 to the first interaction of the application described in FIG. 1, the interactive speech application outputs the prompt of step 120 of FIG. 1 (210). The application then waits for the caller's response (220, 130). This step should be implemented not only to process a received response, as shown in the example of FIG. 1 (140), but also to handle a lack of response. For example, if no response is received within a predetermined time, the application can be implemented

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to "time out" (230) and reprompt the caller (step 215) with an appropriate prompt such as "I'm sorry, I didn't hear your response. Please repeat your answer now," and return to waiting for the caller's response (220, 130) (Marx Col. 1 lines 30-67).

Further, Marx improves these well known limitations by teaching call flow design using a call flow interface whereby valid user responses based on a vocabulary database and yes/no module are defined (Marx Col. 18 lines 47-56).

Marx also teaches for example, an ItemList Module 520 accesses a customized recognized vocabulary having entries that identify people recognized by the Service 410. In the example of FIG. 1, the recognized vocabulary corresponds to employees of Company A along with an operator and/or names of departments (e.g., sales, customer service, etc.). This customized vocabulary will typically be implemented by the application developer to recognize an employee not only by full name, but also by other names by which the employee could be recognized, such as just a last name, just a first name, or a nickname, perhaps combined with a last name. For example, if an employee is named Michael A. Smith, the database should recognize not only "Michael Smith," but also other names by which a caller is likely to identify that employee, such as "Mike Smith," "Michael," "Mike," and "Smith." (Marx Col. 8 line 64 – Col. 9 line 14).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Ehsani to incorporate adding a representation of at least one grammar, selected by the designer from a list of existing grammars, to the call flow representation in response to at least one designer

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instruction, received via the user interface, to add the at least one grammar in association with the first prompt, the at least one grammar defining valid responses to the first prompt, adding a representation of a second prompt to the call flow representation in response to at least one designer instruction, received via the user interface, to add the second prompt, the second prompt to be provided to the user should the user respond to the first prompt with one of the valid responses defined in the at least one grammar, adding a representation of a third prompt to the call flow representation in response to at least one designer instruction, received via the user interface, to add the third prompt, the third prompt to be provided to the user should the user respond to the first prompt with the response option, and automatically generating the speech recognition application call flow from the call flow representation such that if the response option is defined as a valid response in the at least one grammar the third prompt is presented to the user instead of the second prompt when the user responds to the first prompt with the response option as taught by Marx to allow for a call flow design application that can handle generic response such as yes/no as well as specific grammar responses and prompts in the same instance, wherein multiple prompts can take place depending on the selected designer vocabulary and dialog modules, such as employee name, company name, yes/no, and as a last resort live communication with an operator (Marx Col. 8 line 64 – Col. 9 line 14).

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Colucci whose telephone number is (571)-270-1847. The examiner can normally be reached on 9:30 am - 6:00 pm, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571)-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner, Art Unit 2626  
Patent Examiner

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